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INSTRUCTIONS FOR COMPLETING DD FORM 1423

(See DoD 5010.12M for detailed instructions.)

FOR GOVERNMENT PERSONNEL

- Item A. Self-explanatory.
- Item B. Self-explanatory.
- Item C. Mark (X) appropriate category: TDP - Technical Data Package; TM - Technical Manual; Other - other category of data, such as 'Provisioning', 'Configuration Management', etc.
- Item D. Enter name of system/item being acquired that data will
- Item E. Self-explanatory (to be filled in after contract award).
- Item F. Self-explanatory (to be filled in after contract award).
- Item G. Signature of preparer.
- Item H. Date CDRL was prepared.
- Item I. Signature of CDRL approval authority.
- Item J. Date CDRL was approved.
- Item 1. See DoD FAR Supplement Subpart 4.71 for proper numbering.
- Item 2. Enter title as it appears on data acquisition document cited in Item 4.
- Item 3. Enter subtitle of data item for further definition of data item (optional entry).
- Item 4. Enter Data Item Description (DID) number, military specification number, or military standard number listed in DoD 5010.12-L (AMSDL), or one-time DID number, that defines data content and format requirements.
- Item 5. Enter reference to tasking in contract that generates requirement for the data item (e.g. Statement of Work paragraph number).
- Item 6. Enter technical office responsible for ensuring adequacy of the data item.
- Item 7. Specify requirement for inspection/acceptance of the data item by the Government.
- Item 8. Specify requirement for approval of a draft before preparation of the final data item.
- Item 9. For technical data, specify requirement for contractor to mark the appropriate distribution statement on the data (ref DoDD 5230.24).
- Item 10. Specify number of times data items are to be delivered.
- Item 11. Specify as-of date of data item, when applicable.
- Item 12. Specify when first submittal is required.
- Item 13. Specify when subsequent submittals are required, when applicable.
- Item 14. Enter addresses and number of draft/final copies to be delivered to each addressee. Explain reproducible copies in Item 16.
- Item 15. Enter total number of draft/final copies to be delivered.
- Item 16. Use for additional/clarifying information for items 1 through 15. Examples are: Tailoring of documents cited in Item 4; Clarification of submittal dates in Items 12 and 13; Explanation of reproducible copies in Item 14; Desired medium for delivery of the data item.

FOR THE CONTRACTOR

Item 17. Specify appropriate price group from one of the following groups of effort in developing estimated prices for each data item listed on the DD Form 1423.

a. Group I. Definition - Data which is not otherwise essential to the contractor's performance of the primary contracted effort (production, development, testing and administration) but which is required by DD Form 1423.

Estimated Price - Costs to be included under Group I are those applicable to preparing and assembling the data item in conformance with Government requirements, and the administration and other expenses related to reproducing and delivering such data items to the Government.

b. Group II. Definition - Data which is essential to the performance of the primary contracted effort but the contractor is required to perform additional work to conform to Government requirements with regard to depth of content, format, frequency of submittal, preparation, control, or quality of the data item.

Estimated Price - Costs to be included under Group II are those incurred over and above the cost of the essential data item without conforming to Government requirements, and the administrative and other expenses related to reproducing and delivering such data item to the Government.

c. Group III. Definition - Data which the contractor must develop for his internal use in performance of the primary contracted effort and does not require any substantial change to conform to Government requirements with regard to depth of content, format, frequency of submittal, preparation, control, and quality of the data item.

Estimated Price - Costs to be included under Group III are the administrative and other expenses related to reproducing and delivering such data item to the Government.

d. Group IV. Definition - Data which is developed by the contractor as part of his normal operating procedures and his effort in supplying these data to the Government is minimal.

Estimated Price - Group IV items should normally be shown on the DD Form 1423 at no cost.

Item 18. For each data item, enter an amount equal to that portion of the total price which is estimated to be attributable to the production or development for the Government of that item of data. These estimated data prices shall be developed only from those costs which will be incurred as a direct result of the requirement to supply data, over and above those costs which would otherwise be incurred in performance of the contract if no data were required. The estimated data prices shall not include any amount for rights in data. The Government's right to use data shall be governed by the pertinent provisions of the contract.



REV: -

## ENGINEERING DATA REQUIREMENTS

(ATTACHMENT "A")

NOTE: MILITARY SPECIFICATIONS/STANDARDS WILL NOT BE FURNISHED IN THE BID SET.

1. THE FOLLOWING INSTRUCTIONS ARE FURNISHED FOR THE MANUFACTURE OF

PISTON ASSEMBLY MLG

F-15

2. PART NUMBER

68A412704-1004

3. NATIONAL STOCK NUMBER

1620-01-445-1436

4. THE FOLLOWING SPECIFICATIONS/STANDARDS, ETC., WILL BE USED IN LIEU OF THE DATA INDICATED. THE SUPERSEDED DATA WILL NOT BE FURNISHED UNLESS SO INDICATED.

- a. OO-ALC/LILE system engineering retains all rights to review and accept MRB'S prior to shipment of discrepant items. All deviations, minor and major, from the engineering drawing package will be submitted for MRB disposition.
- b. Prior to contract award, the contractor will certify to the government in writing full compliance with manuals, specifications, and standards called out and required for the manufacture of this contracted landing gear component/assembly. Contractor is responsible to completely search these manuals, specifications, and standards and fully understand the requirements necessary to manufacture landing gear components. Any questions can be forwarded to this office OO-ALC/LILE.
- c. Inspection requirements are as follows:
1. Perform fluorescent penetrant inspection per ASTM E1417, Type I, Method B or C, Level 3 or 4, in lieu of PS 21202 Class A, with the following acceptance/rejection criteria: NO DEFECTS ALLOWED. The intent of "NO DEFECTS ALLOWED" is that the inspection is conducted at the required sensitivity level and there shall be no indication allowed. The inspector performing the inspection shall be certified to level II with the inspection procedures developed by a level III as specified in MIL-STD-410.
  2. Perform Magnetic Particle inspection per ASTM E1444, in lieu of PS 21201 CLASS B. Use full wave direct current (FWDC), wet continuous method, fluorescent type with the following acceptance/rejection criteria: NO DEFECTS ALLOWED. The intent of "NO DEFECTS ALLOWED" is that the inspection is conducted at the required sensitivity level and there shall be no indications allowed. The inspector performing the inspection shall be certified to Level II with the inspection procedures developed by a Level III as specified in NAS 410.
- d. Mark and identify per MIL-STD-130 as an alternate to PS16001. (ref. note #19)
- e. Heat treat to drawing specifications per MIL-STD-6875 as an alternate to PS 15296 or PS 15351.
- f. (For large assemblies and components utilize the following statement in lieu of PS 16001) Serial number shall be vibropeened (with vibrating pneumatic pencil), in 0.09" letters 0.004"-0.007" deep in the location indicated. If the drawing does not indicate a location, OO-ALC/LILE shall provide S/N location instructions. Serialization of item shall be accomplished as follows: the serialization shall begin with the cage (FSCM) of the contractor named on the contract, followed by a dash and the 2 digit year of manufacture, followed by a dash and a sequentially unique 3 digit number. A contractor who receives numerous intermittent contracts shall start serialization of item with the next number in sequence of the prior contract. If a contract produces more than 999 items, the serial number should begin using 4 digit serial numbers. The serial number should appear like this: "S/N 98747-01-001".
- g. For parts heat-treated to 180KSI and above, any surface ground/machined after heat treat, shall be inspected for abusive grinding/machining burns per MIL-STD-867. Grinding shall be per MIL-STD-866.
- h. Temper Etch per MIL-STD-867 may be used as an alternate to PS 21205.
- i. Cadmium Plate per MIL-STD-870 Type II, Class 2 as an alternate to PS 13144 13101 & PS 13144.

PREPARED BY

TERRY L. JONES

SYMBOL

LGMPM

DATE

19 Nov 01

PART NUMBER 68A412704-1004	NATIONAL STOCK NUMBER 1620-01-445-1436
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- j. Chromium Plate per MIL-STD-1501, Type II, Class 3 as an alternate to PS 13102.
- k. Install bushings per the following in lieu of PS 17034.
- a. The bushing installations shall be accomplished in such a manner as to avoid damage to the finish on the I.D. of the housing into which the bushing is installed, or the finish of the O.D. of the bushing. Forced installation of sub-zero installations, such as the use of a press or hammer is not permitted, and is not acceptable. A small nonmetallic hammer may be used to tap the bushing into alignment with the housing bore, or to seat the bushing.
  - b. Prior to bushing installation, the parts and housing bore shall be cleaned with a cleaning solvent to remove all contamination.
  - c. Liquid nitrogen shall be used for all sub-zero installations unless some other sub-zero coolant is specified, and approved by OO-ALC/LILEC engineering. The soak time of the bushing in the liquid nitrogen shall be sufficient to allow the bushing to reach the same temperature as the coolant.
  - d. The bushing shall be installed into the housing immediately upon removal from the coolant with an absolute minimum of lost time. Trial runs shall be accomplished as necessary to minimize installation time which should be in the order of about seven (7) seconds maximum.
  - e. It may occasionally be necessary to heat the housing into which the bushing is to be installed, in addition to sub-zero cooling of the bushing. Detail parts in process, which do not have paint or sealant or other organic material applied prior to heating, the parts shall be heated by the use of radiant heat techniques, such as thermal blankets, infrared lamps etc.; to the maximum temperature of 250 F. The temperature measuring devices shall be used to monitor heat and shall be located on areas of the part expected to reach maximum temperature. No scaling, oxidation, or corrosion shall be permitted.
  - f. Bushings without flanges shall be installed into housing bore which has received a light coat of sealant per MIL-S-81733. Install shrunk bushing and wipe off any excess sealant that may have extruded around the periphery of both ends of the bushings.
  - g. Bushings with flanges shall be installed in a similar manner as paragraph (F) except sealant shall also be applied to face or lug under flange. Sealant shall be applied in such a manner as to ensure complete coverage of inside face of bushing flange when bushing is installed. Wipe off any excess sealant amount periphery of bushing flange forming a bead. Wipe any excess sealant from other end of bushing flange forming a bead. Wipe any excess sealant from other end of bushing also.
  - h. For bushings with external grease grooves the inside of the lug will be coated with MIL-C-16173 prior to bushing installation and face of lug will be coated with MIL-S-81733 per paragraph g.
- l. Finish per the following in lieu of note # 26.
- a. Apply one coat epoxy waterborne primer per MIL-PRF-85582, Type I Class 2. Alternate one coat of epoxy polyamide primer per MIL-PRF-23377 Type I. Apply two topcoats polyurethane per MIL-PRF-85285, Type I, color number 17925 (white) per FED-STD-595, in lieu of MIL-C-83286, which has been cancelled.
- m. Shot Peen per SAE AMS-S-13165 as an alternate to PS 14023. ( Insure all requirements of drawing 68A412704 note #27 are complied with.

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REV:	<b>ENGINEERING DATA REQUIREMENTS CONTINUATION SHEET</b> <b>(ATTACHMENT "A")</b>	
PART NUMBER 68A412704-1004	NATIONAL STOCK NUMBER 1620-01-445-1436	
<p>n. Phosphate Coat per MIL-P-16232 as an alternate to PS 13205.</p> <p>o. Ion Vapor Deposit Aluminum (IVD) per MIL-C-83488 as an alternate to PS 13143.</p> <p>p. Anodize per MIL-A-8625 Type II, Class 1, as an alternate to PS 13201.</p> <p>q. Grind per MIL-STD-866 as an alternate to PS 20710.</p> <p>r. Bearing General specification Qualifications MIL-B-81934 has been cancelled use SAE AS 81934</p> <p>s. QQ-C-530 condition "H" can be used as an alternate to PS1593.</p> <p>5. The required forging will be procured from the qualified forging source using the original certified forging procedures and dies/tooling.</p> <p style="margin-left: 40px;">a. Prior to contract award the detail part bidder will provide certification, from the forging source, to the government that the certified dies and forging procedures are available and that the forging source has an agreement with the detail part bidder to provide forgings for their use in the event they are the successful bidder.</p> <p style="margin-left: 40px;">b. Prior to production, forging lot qualification will be accomplished as specified on the forging drawing and MIL-A-22771. The contractor will assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment to the Government. Ultrasonic inspection on each forging per MIL-STD-2154.</p> <p><b>FORGING SOURCE, CONTROL AND LOCATION OF DIES:</b></p> <p>1. FORGING DRAWING:</p> <div style="margin-left: 40px;"> Drawing Number: 68A412704  Part Number 68A412704-1004  Die Number: 7782 </div> <p>2. CONTROL OF FORGING PROCESS: McDonnell Douglas</p> <p>3. LOCATION OF FORGING DIES:</p> <div style="margin-left: 40px;"> Kropp Forging Company  5301 West Roosevelt Road  Cicero, Illinois  (708) 652-6691 EXT. 324 (Chuck Meyers) </div>		
PREPARED BY TERRY L. JONES	SYMBOL LGMPM	DATE 19 Nov 01

**SOURCE QUALIFICATION REQUIREMENTS**  
(PL98-525, SECTION 2319)

STOCK NR (NSN) 1620014451463

PART NUMBER (P/N) 68A41d2704-1004

NOUN: Piston Assembly, Main Landing Gear

AIRCRAFT: F-15E

**SECTION C**

**QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:**

1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first article exhibit may be required to verify production capability.
3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the pre-contract award qualification article.
5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N 68A41d2704-1004 and specification SAE-AMS-7190. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
9. Testing for material and process compliance.
  - (a) Material analysis
  - (b) Heat treat
  - (c) Grinding
  - (d) Plating
  - (e) Finish
  - (f) Grain flow
  - (g) Other

**SOURCE QUALIFICATION REQUIREMENTS**  
(PL98-525, SECTION 2319)

STOCK NR (NSN) 1620014451463

PART NUMBER (P/N) 68A41d2704-1004

NOUN: Piston Assembly, Main Landing Gear

AIRCRAFT: F-15E

10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.

11. The estimated cost of government testing and evaluation is \$30,000.

12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

**SECTION D**

**QUALIFICATION WAIVER REQUIREMENTS.**

1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.

a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.

b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.

c. This waiver will be granted if and only if the design control authority (LILE) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LILE reserves the right to require a pre-qualification article of all offerers.

2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.

3. Maximum time for approval of qualification by similarity will not exceed 15 days.

SPECIAL PACKAGING INSTRUCTION			CODE ID 98747	SPI NO. (TPO) F01-235-2271
			SHEET 1 OF 3	
PART OR DRAWING NO. 68A412704-1002	NATIONAL STOCK NO. 1620-01-235-2271	CURRENT REV A	ILL. T. LUCERO CHK. T. ZIMMERMAN ENGR. M. STEPHENS AUTH. P. FRANCIS	
ITEM NOMENCLATURE PISTON, MLG, F-15		ORIGINAL DATE 95131		

MILITARY PRESERVATION IAW MIL-STD-2073

SERVICEABLE METHOD: 20  
UNSERVICEABLE METHOD: 20  
QUP 001  
ICQ 000

CLEANING & DRYING: IAW MIL-STD-2073  
PRESERVATIVE: MIL-PRF-16173, GR2

MARKING IAW MIL-STD-129

SPECIAL MARKINGS:  
A) SPI NO. F01-235-2271  
\*MARK THE SPI NUMBER ON ONE SIDE OF THE CONTAINER  
AND ON ALL REMOVABLE DUNNAGE.

CLOSURE

LEVEL A: IAW: ASTM-D6251  
LEVEL B: IAW: ASTM-D6251

PACKING AS SPECIFIED BELOW AND BILL OF MATERIALS

LEVEL	SPEC	STYLE	TYPE	CL	VRTY	GR	TR
A	ASTM-D6251	A1	III	2			B
B	ASTM-D6251	A1	III	1			A

	LEVEL A	LEVEL B	
GROSS CU FT	11.156	11.156	
GROSS WT LBS	166.80	166.80	
DESIGN FRAGILITY G	110	110	
	LENGTH	WIDTH	DEPTH
CNTR I.D.	49	19	12 1/2
CNTR O.D.			
LEVEL A	51	21	18
LEVEL B	51	21	18
ITEM DIM	45	14 1/2	9 1/2
ITEM WT LBS	88		

REVISIONS		
LTR	DESCRIPTION	DATE
A	UPDATED, ADDED WOOD STATEMENT	03105

-4	1	CUSHION (CENTER)	49 X 19 X 8	MIL-PRF-26514 TYPE 1, CLASS 1, GR A, FIN 1
-3	2	CUSHIONS (TOP & BOTTOM)	49 X 19 X 2	MIL-PRF-26514 TYPE 1, CLASS 1, GR A, FIN 1
-2	1	WRAP	50 X 50	A-A-3174, TYPE I, CLASS 1, GRADE A, FIN 1
-1	3	SKIDS	21 X 4 (NOM) X 4	ASTM-D6199 CLASS 2, GROUP 1
P/N	QTY REQD	NOMENCLATURE DESCRIPTION	SIZE (INCHES UNLESS SPECIFIED)	MATERIAL SPECIFICATION REVISIONS

SPI NO. F01-235-2271

SPECIAL PACKAGING INSTRUCTION	CODE ID 98747	SPI NO. (TPD) F01-235-2271
ITEM NOMENCLATURE PISTON, MLG, F-15		SHEET 2 OF 3
<p>EUROPEAN UNION (EU) REQUIREMENTS NOTICES</p> <p>NOTICE 1: LUMBER AND PACKAGING/CONTAINER STATEMENT – "ALL WOODEN LUMBER CONTAINERS PRODUCED ENTIRELY OR IN PART OF NON-MANUFACTURED SOFTWOOD SPECIES SHALL BE CONSTRUCTED FROM HEAT TREATED (HT) MATERIAL (HT TO 56 DEGREES CENTIGRADE OR 133 DEGREES FAHRENHEIT FOR 30 MINUTES). CERTIFICATION IS REQUIRED BY AN ACCREDITED AGENCY RECOGNIZED BY THE AMERICAN LUMBER STANDARDS COMMITTEE (ALSC). CONSTRUCTION AND CERTIFICATION SHALL BE IN ACCORDANCE WITH NON-MANUFACTURED WOOD PACKING POLICY AND NON-MANUFACTURED WOOD PACKING ENFORCEMENT REGULATIONS, BOTH DATED MAY 30, 2001." THESE DOCUMENTS CAN BE FOUND AT <a href="http://WWW.APHIS.USDA.GOV">WWW.APHIS.USDA.GOV</a>.</p> <p>NOTICE 2: WOODEN PALLET STATEMENT – "ALL WOODEN PALLETS PRODUCED ENTIRELY OR IN PART OF NON-MANUFACTURED SOFTWOOD SPECIES SHALL BE CONSTRUCTED FROM HEAT TREATED (HT) MATERIAL (HT TO 56 DEGREES CENTIGRADE OR 133 DEGREES FAHRENHEIT FOR 30 MINUTES). CERTIFICATION IS REQUIRED BY AN ACCREDITED AGENCY RECOGNIZED BY THE AMERICAN LUMBER STANDARDS COMMITTEE (ALSC). CONSTRUCTION AND CERTIFICATION SHALL BE IN ACCORDANCE WITH NON-MANUFACTURED WOOD PACKING POLICY AND NON-MANUFACTURED WOOD PACKING ENFORCEMENT REGULATIONS, BOTH DATED MAY 30, 2001." THESE DOCUMENTS CAN BE FOUND AT <a href="http://WWW.APHIS.USDA.GOV">WWW.APHIS.USDA.GOV</a>.</p> <p>NOTICE 3: HARDWOOD SPECIES STATEMENT – "ALL WOODEN PALLETS PRODUCED ENTIRELY OF NON-MANUFACTURED HARDWOOD SPECIES SHALL BE IDENTIFIED BY A PERMANENT MARKING OF "NC" (NON-CONIFEROUS), 1.25 INCHES OR GREATER IN HEIGHT, ACCOMPANIED BY THE CAGE CODE OF THE CONTRACTED MANUFACTURER AND THE MONTH AND YEAR OF THE CONTRACT. ON PALLETS, THE MARKING SHALL BE APPLIED TO THE STRINGER OR BLOCK ON OPPOSITE SIDES AND ENDS OF THE PALLET AND BE CONTRASTING AND CLEARLY VISIBLE."</p> <p>NOTES:</p> <ol style="list-style-type: none"> <li>1. USE MIL-C-16173, GRADE 2 ON CRITICAL SURFACES. WRAP ENTIRE ITEM IN REF.-2.</li> <li>2. CUT REF.-4 TO SHAPE OF PISTON CENTERED ON CUSHION. PLACE WRAPPED ITEM INTO CUT OUT. REF.-4. INSERT INTO CONTAINER AS ILLUSTRATED.</li> <li>3. SKIDS INSET ONE INCH EACH END WITH SKIDS RUNNING THE WIDTH OF THE CONTAINER, CENTER SKID.</li> </ol>		

# SPECIAL PACKAGING INSTRUCTION

CODE ID

98747

SPI NO. (TPD)

F01-235-2271

ITEM NOMENCLATURE

PISTON, MLG, F-15

SHEET 3 OF 3

